OIPE
AUG 09 2006
PATENT & TRADEMARK OFFICE

US Dept. of Commerce PATENT & TRADEMARK OFFICE (REV. 1/06) INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)	ATTY DOCKET NO. 97005-US-DIV1	APPLICATION NO. 09/933,960
	APPLICANT(S) Robert L. THORNTON	
	FILING DATE August 20, 2001	GROUP 2828

U.S. PATENT DOCUMENTS

Examiner Initials	Cite No.	Document Number	Date	Name
JM	1	4,144,101	03/13/1979	Rideout
	2	5,073,041	12/17/1991	Rastani
	3	5,115,442	05/19/1992	Lee et al.
	4	5,126,875	06/30/1992	Tabuchi
	5	5,171,703	12/15/1992	Lin et al.
	6	5,179,567	01/12/1993	Uomi et al.
	7	5,245,622	09/14/1993	Jewell et al.
	8	5,258,990	11/02/1993	Olbright et al.
	9	5,262,491	11/16/1993	Jain et al.
	10	5,331,654	07/19/1994	Jewell et al.
	11	5,354,709	10/11/1994	Lorenzo et al.
JM	12	5,400,354	03/21/1995	Ludowise et al.
	13	5,412,680	05/02/1995	Swirhun et al.
JM	14	5,416,044	05/16/1995	Chino et al.
	15	5,557,627	09/17/1996	Schneider, Jr. et al.
	16	5,568,499	10/22/1996	Lear
	17	5,581,571	12/03/1996	Holonyak, Jr. et al.
	18	5,594,751	01/14/1997	Scott
	19	5,633,527	05/27/1997	Lear
	20	5,659,193	08/19/1997	Ishigaki
	21	5,717,533	02/10/1998	Poplawski et al.
	22	5,727,014	03/10/1998	Wang et al.
	23	5,734,588	03/31/1998	Rose et al.
	24	5,739,945	04/14/1998	Tayebati
	25	5,809,051	09/15/1998	Oudar
	26	5,864,468	01/26/1999	Poplawski et al.
	27	5,881,085	03/09/1999	Jewell
	28	5,897,329	04/27/1999	Jewell
JM	29	5,903,588	05/11/1999	Guenter et al.

Date: July 27, 2006 /James Menefee/ 10/02/2006

JM	30	5,903,589	05/11/1999	Jewell
	31	6,014,395	01/11/2000	Jewell
	32	6,052,399	04/18/2000	Sun
	33	09/552,568	04/19/2000	Jewell
	34	6,069,908	05/30/2000	Yuen et al.
	35	6,075,804	06/13/2000	Deppe et al.
	36	6,148,016	11/14/2000	Hegblom et al.
JM	37	6,201,704	03/13/2001	Poplawski et al.
	~~38~~	~~6,200,681~~	~~03/27/2001~~	~~Thornton~~
JM	39	6,269,109	07/31/2001	Jewell
	~~40~~	~~6,297,068~~	~~10/02/2001~~	~~Thornton~~
	~~41~~	~~6,304,588~~	~~10/16/2001~~	~~Thornton~~
JM	42	2002/0097764	07/25/2002	Jewell
JM	43	6,459,719	10/01/2002	Jewell
JM	44	2004/0062284	04/01/2004	Jewell
JM	45	6,765,943	07/20/2004	Jewell

FOREIGN PATENT DOCUMENTS

Examiner Initials	Cite No.	Document Number	Date	Country	With English Abstract	With English Translation
JM	46	JP 10-065266	03/06/1998	Japan	Y	Y
JM	47	JP 10-125999	05/15/1998	Japan	Y	Y
JM	48	JP 10-229248	08/25/1998	Japan	Y	Y
JM	49	EP 0 858 137 A3	04/19/2000	EPO		

OTHER DOCUMENTS

Examiner Initials	Cite No.	(Including Author, Title, Date, Pertinent Pages, etc.)
JM	50	A.R. Sugg et al., Native Oxide-Embedded $Al_xGa_{1-x}As$-GaAs-$In_xGa_{1-x}As$ Quantum Well Heterostructure Lasers, Appl. Phys. Lett. 62(11) 1259 (Mar. 15, 1993).
	51	B.J. Thibeault et al., Reduced Optical Scattering Loss in Vertical-Cavity Lasers Using a Thin (300 Å) Oxide Aperture, IEEE Photonics Tech. Lett. 8(5) 593 (May 1996).
	52	C.L. Chua et al., Low-Threshold 1.57-μm VC-SEL's Using Strain-Compensated Quantum Wells and Oxide/Metal Backmirror, IEEE Photonics Tech. Lett. 7(5) 444 (May 1995).
	53	D.G. Deppe et al., Atom Diffusion and Impurity-Induced Layer Disordering in Quantum Well III-V Semiconductor Heterostructures, J. Appl. Phys. 64(12) R93 (Dec. 15, 1988).
	54	D.G. Deppe et al., Very-Low-Threshold Index-Confined Planar Microcavity Lasers, IEEE Photonics Tech. Lett. 7(9) 965 (Sept. 1995).
	55	D.L. Huffaker et al., Improved Mode Stability in Low Threshold Single Quantum Well Native-Oxide Defined Vertical-Cavity Lasers, Appl. Phys. Lett. 65(21) 2642 (Nov. 21, 1994).
	56	D.L. Huffaker et al., Lasing Characteristics of Low Threshold Microcavity Lasers Using Half-Wave Spacer Layers and Lateral Index Confinement, Appl. Phys. Lett. 66(14) 1723 (Apr. 3, 1995).
	57	D.L. Huffaker et al., Low-Threshold Half-Wave Vertical-Cavity Lasers, Elec. Lett. 30(23) 1946 (Nov. 10, 1994).
JM	58	D.L. Huffaker et al., Native-Oxide Defined Ring Contact for Low-Threshold Vertical-Cavity Lasers, Appl. Phys. Lett. 65(1) 97 (July 4, 1994).

Date: July 27, 2006 /James Menefee/ 10/02/2006

JM	59	D.L. Huffaker et al., Spontaneous Coupling to Planar and Index-Confined Quasimodes of Fabry-Perot Microcavities, Appl. Phys. Lett. 67(18) 2595 (Oct. 30, 1995).
	60	D.L. Huffaker et al., Threshold Characteristics of Planar and Index-Guided Mircocavity Lasers, Appl. Phys. Lett. 67(1) 4 (July 3, 1995).
	61	E.R. Hegblom et al., Estimation of Scattering Losses in Dielectrically Apertured Vertical Cavity Lasers, Appl. Phys. Lett. 68(13) 1757 (Mar. 25, 1996).
	62	F. Koyoma et al., Wavelength Control of Vertical Cavity Surface-Emitting Lasers by Using Nonplanar MOCVD, IEEE Photonics Tech. Lett. 7(1) 10 (Jan. 1995).
	63	F.A. Kish et al., Dependence on Doping Type (p/n) of the Water Vapor Oxidation of High-Gap $Al_xGa_{1-x}As$, Appl. Phys. Lett. 60(25) 3165 (June 22, 1992).
	64	F.A. Kish et al., Low-Threshold Disorder-Defined Native-Oxide Delineated Buried-Heterostructure $Al_xGa_{1-x}As$-GaAs Quantum Well Lasers, Appl. Phys. Lett. 58(16) 1765 (Apr. 22, 1991).
	65	F.A. Kish et al., Native-Oxide Stripe-Geometry $In_{0.5}(Al_xGa_{1-x})_{0.5}P$-$In_{0.5}Ga_{0.5}P$ Heterostructure Laser Diodes, Appl. Phys. Lett. 59(3) 354 (July 19, 1991).
	66	F.A. Kish et al., Planar Native-Oxide $Al_xGa_{1-x}As$-GaAs Quantum Well Heterostructure Ring Laser Diodes, Appl. Phys. Lett. 60(13) 1582 (Mar. 30, 1992).
	67	G. Ronald Hadley et al., Comprehensive Numerical Modeling of Vertical-Cavity Surface-Emitting Lasers, IEEE J. Quantum Elec. 32(4) 607 (Apr. 1990).
	68	G.M. Yang et al., Ultralow Threshold Current Vertical-Cavity Surface-Emitting Lasers Obtained with Selective Oxidation, Elec. Lett. 31(11) 886 (May 25, 1995).
	69	Giorgio Giaretta et al., A Novel 4 x 8 Single-Mode Independently Addressable Oxide-Isolated VCSEL Array, IEEE Photonics Tech. Lett. 9(9) 1196 (Sept. 1997).
	70	Gye Mo Yang et al., Influence of Mirror Reflectivity on Laser Performance of Very-Low-Threshold Vertical-Cavity Surface-Emitting Lasers, IEEE Photonics Tech. Lett. 7(11) 1228 (Nov. 1995).
	71	H.Y. Chu et al., Polarization Characteristics of Index-Guided Surface Emitting Lasers with Tilted Pillar Structure, Elec. Lett. 9(8) 1066 (1997).
	72	I. Babić Dubravko et al., Room-Temperature Continuous-Wave Operation of 1.54-μm Vertical-Cavity Lasers, IEEEE Photonics Tech. Lett. 7(11) 1225 (Nov. 1995).
	73	J. Cibert et al., Kinetics of Implantation Enhanced Interdiffusion of Ga and Al at GaAs-$Ga_xAl_{1-x}As$ Interfaces, Appl. Phys. Lett. 49(4) 223 (July 28, 1986).
	74	J.M. Dallesasse et al., Native-Oxide Masked Impurity-Induced Layer Disordering of $Al_xGa_{1-x}As$ Quantum Well Heterostructures, Appl. Phys. Lett. 58(9) 974 (Mar. 4, 1991).
	75	J.M. Dallesasse et al., Native-Oxide Stripe-Geometry $Al_xGa_{1-x}As$- GaAs Quantum Well Heterostructure Lasers, Appl. Phys. Lett. 58(4) 394 (Jan. 28, 1991).
	76	J.M. Dallesasse et al., Native-Oxide-Defined Coupled-Stripe $Al_xGa_{1-x}As$- GaAs Quantum Well Heterostructure Lasers, Appl. Phys. Lett. 58(8) 834 (Feb. 25, 1991).
	77	J.M. Dallesasse et al., Stability of AlAs in $Al_xGa_{1-x}As$- GaAs Quantum Well Heterostructures, Appl. Phys. Lett. 56(24) 2436 (June 11, 1990).
	78	Jack L. Jewell et al., Surface-Emitting Lasers Break the Resistance Barrier, Photonics Spectra (Nov. 1992).
	79	K.D. Choquette et al., Cavity Characteristics of Selectively Oxidized Vertical-Cavity Lasers, Appl. Phys. Lett. 66(25) 3413 (June 19, 1995).
	80	K.D. Choquette et al., Continuous Wave Operation of 640-660nm Selectively Oxidized AlGaInP Vertical-Cavity Lasers, Elec. Lett. 31(14) 1145 (July 6, 1995).
	81	K.D. Choquette et al., Elec. Lett. 32(5) 459 (Feb. 29, 1996).
	82	K.D. Choquette et al., Fabrication and Performance of Selectively Oxidized Vertical-Cavity Lasers, IEEE Photonics Tech. Lett. 7(11) 1237 (Nov. 1995).
	83	K.D. Choquette et al., Low Threshold Voltage Vertical-Cavity Lasers Fabricated by Selective Oxidation, Elec. Lett. 30(24) 2043 (Nov. 24, 1994).
JM	84	K.L. Lear et al., High-Frequency Modulation of Oxide-Confined Vertical Cavity Surface Emitting Lasers, Elec. Lett. 32(5) 457 (Feb. 29, 1996).

Date: July 27, 2006 /James Menefee/ 10/02/2006

JM	85	K.L. Lear et al., Modal Analysis of a Small Surface Emitting Lasers with a Selectively Oxidized Waveguide, Appl. Phys. Lett. 66(20) 2616 (May 15, 1995).
	86	K.L. Lear et al., Index Guiding Dependent Effects in Implant and Oxide Confined Vertical-Cavity Laser, IEEE Photonics Tech. Lett., vol. 8, pp. 740-742, (June 1996).
	87	K.S. Giboney et al., The Ideal Light Source for Datanets, IEEE Spectrum 43 (Feb. 1998).
	88	L.A. Coldren et al., Dielectric Apertures as Intracavity Lenses in Vertical-Cavity Lasers, Appl. Phys. Lett. 68(3) 313 (Jan. 15, 2996).
	89	M. Ochiai et al., Kinetics of Thermal Oxidation of AlAs in Water Vapor, Appl. Phys. Lett. 68(14) 1898-1900 (Apr. 1, 1996).
	90	M.R. Krames et al., Buried-Oxide Ridge-Wavelength InAlAs-InP-InGaAsP (λ~1.3 μm) Quantum Well Heterostructure Laser Diodes, Appl. Phys. Lett. 64(21) 2821 (May 23, 1994).
	91	M.R. Krames et al., Deep-Oxide Planar Buried-Heterostructure InAlAs-InP-InGaAsP (λ~1.3 μm) Quantum Well Heterostructure Laser Diodes, Appl. Phys. Lett. 65(25) 3221 (Dec. 19, 1994).
	92	Michael H. MacDougal et al., Electrically-Pumped Vertical-Cavity Lasers with Al_xO_y-GaAs Reflectors, IEEE Photonics Tech. Lett. 8(3) 310 (Mar. 1996).
	93	Michael H. MacDougal et al., Ultralow Threshold Current Vertical-Cavity Surface-Emitting Lasers with AlAs Oxide-GaAs Distributed Bragg Reflectors, IEEE Photonics Tech. Lett. 7(3) 229 (Mar. 1995).
	94	Michael H. MacDougal et al., Wide-Bandwidth Distributed Bragg Reflectors Using Oxide/GaAs Multilayers, Elec. Lett. 30(14) 1147 (July 7, 1994).
	95	N. El-Zein et al., Native Oxide Coupled-Cavity $Al_xGa_{1-x}As$-GaAs Quantum Well Heterostructure Laser Diodes, Appl. Phys. Lett. 59(22) 2838 (Nov. 25, 1991).
	96	O. Blum et al., Electrical and Optical Characteristics of AlAsSb/GaAsSb Distributed Bragg Reflectors for Surface Emitting Lasers, Appl. Phys. Lett. 67(22) 3233 (Nov. 27, 2995).
	97	P.D. Floyd et al., Comparison of Optical Losses in Dielectric-Apertured Vertical-Cavity Lasers, IEEE Photonics Tech. Lett. 8(5) 590 (May 1996).
	98	P.D. Floyd et al., Vertical Cavity Lasers, Elec. Lett. 32(2) 114 (Jan. 18, 1996).
	99	S.A. Maranowski et al., $Al_xGa_{1-x}As$-GaAs-$In_yGa_{1-y}As$ Quantum Well Heterostructure Lasers with Native Oxide Current-Blocking Windows Formed on Metallized Devices, Appl. Phys. Lett. 64(16) 2151 (Apr.18, 1994).
	100	S.A. Maranowski et al., Native Oxide Top- and Bottom-Confined Narrow Stripe *p-n* $Al_xGa_{1-x}As$-GaAs-$In_yGa_{1-y}As$ Quantum Well Heterostructure Laser, Appl. Phys. Lett. 63(12) 1660 (Sept. 20, 1993).
	101	T.J. Rogers et al., Influence of Cavity Tuning on the Transverse Mode in Vertical-Cavity Lasers, IEEE Photonics Tech. Lett. 7(3) 238 (Mar. 1995).
	102	Y. Hayashi et al., Lasing Characteristics of Low-Threshold Oxide Confinement InGaAs-GaAlAs Vertical-Cavity Surface-Emitting Lasers, IEEE Photonics Tech. Lett. 7(11) 560 (Nov. 1995).
	103	Y. Hayashi et al., Record Low-Threshold Index-Guided InGaAs/GaAlAs Vertical-Cavity Surface-Emitting Laser with a Native Oxide Confinement Structure, Elec. Lett. 31(7) 560 (Mar. 30, 1995).
↓	104	Y. Kobayashi et al., Application of Selective Oxidation Structure to Common-Anode SEL, Advance Compilation of Lectures of the 57th Scientific Lecture Meeting of the Society of Applied Physics Vol. 3 p. 926 (No. 7p-KH-11) (Fall 1996) (with partial English-language translation).
JM	105	Yong-Soo Lee et al., Wet Oxidation of AlAs Grown by Molecular Beam Epitaxy, Appl. Phys. Lett. 65(21) 2717 (Nov. 21, 1994).

EXAMINER	/James Menefee/	DATE CONSIDERED 10/02/2006

Examiner: Initial if citation considered, whether or not citation is in conformance with M.P.E.P. 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Date: July 27, 2006